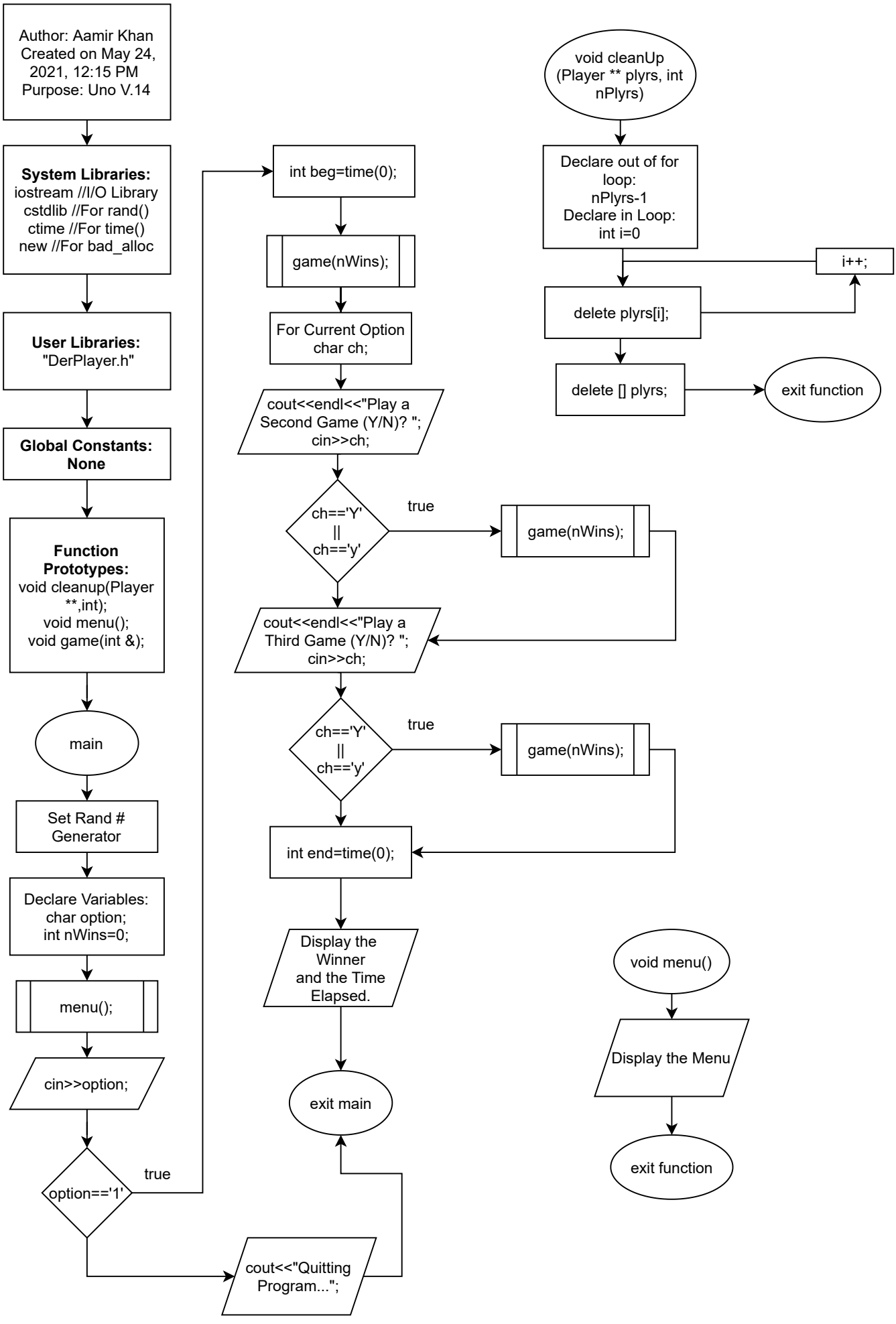
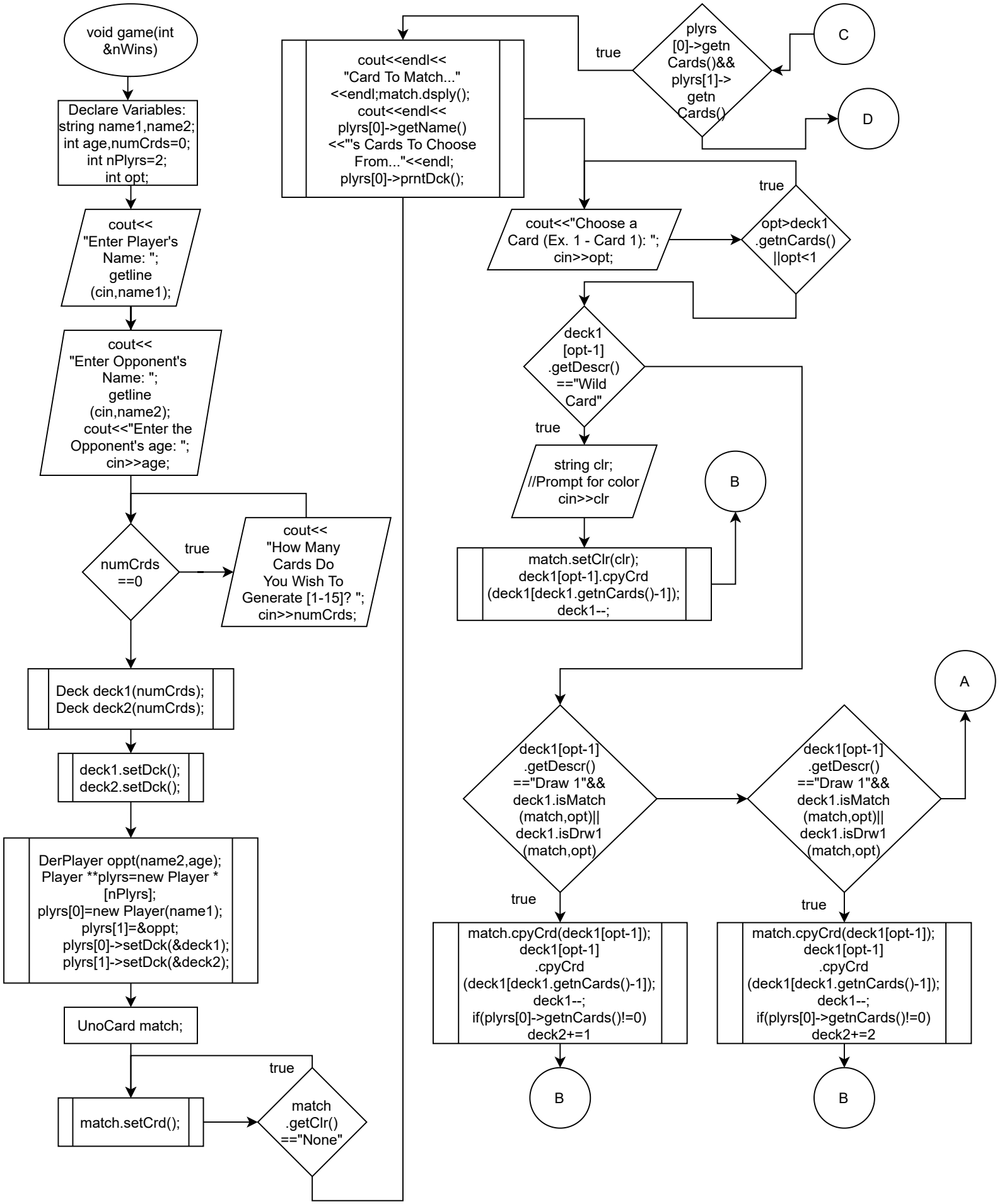
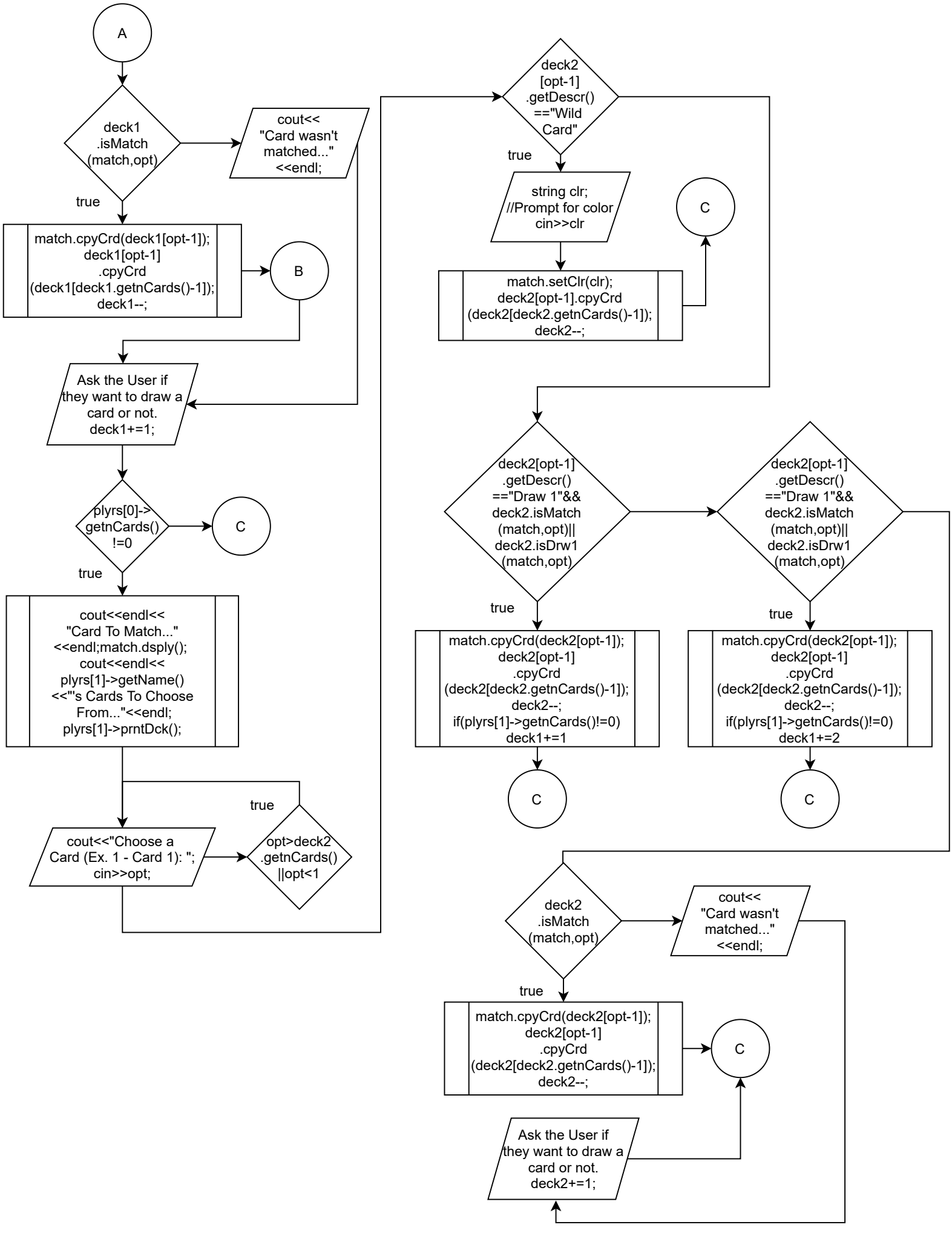
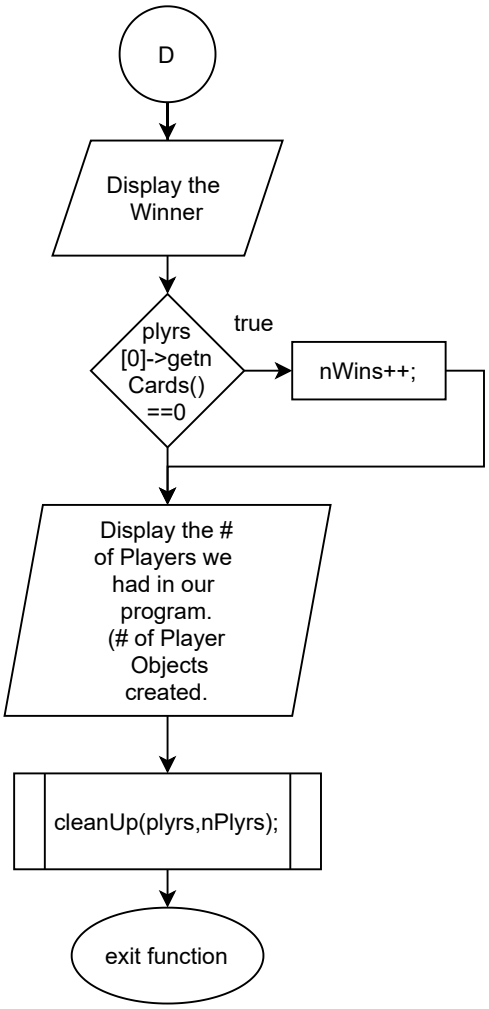
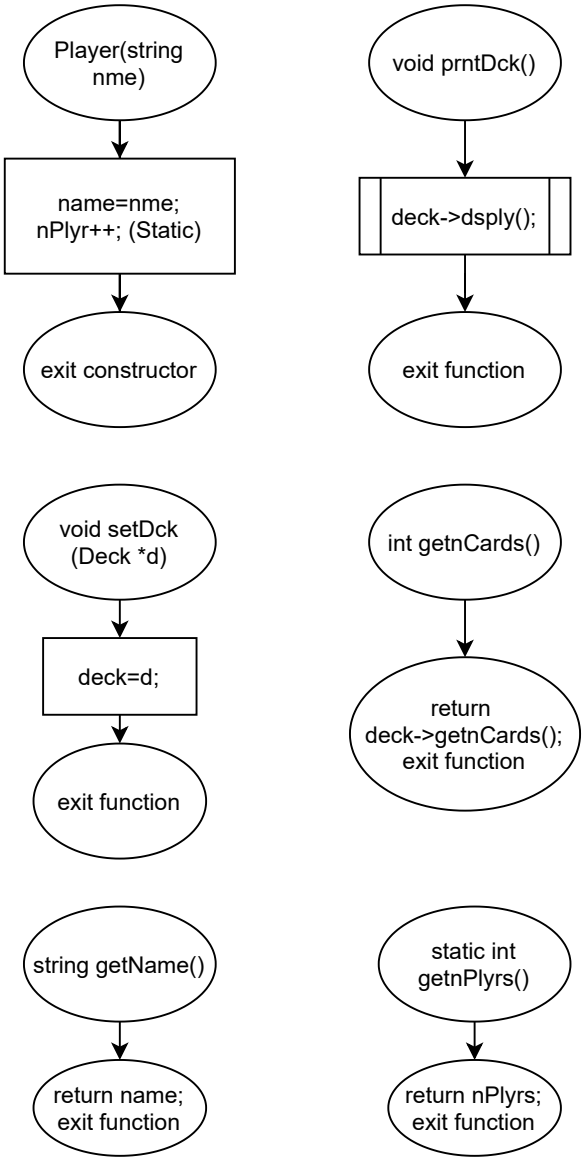

Author: Aamir Khan
Created on May 24, 2021, 12:15 PM
Purpose: Uno V.14
System Libraries:
iostream //I/O Library
cstdlib //For rand()
ctime //For time()
new //For bad_alloc
User Libraries:
"DerPlayer.h"
Global Constants:
None
Function Prototypes:
void cleanup(Player **,int);
void menu();
void game(int &);
main
Set Rand # Generator
Declare Variables:
char option;
int nWins=0;
menu();
cin>>option;
option=='1'
true
int beg=time(0);
game(nWins);
For Current Option
char ch;
cout<<endl<<"Play a Second Game (Y/N)? ";
cin>>ch;
ch=='Y' || ch=='y'
true
game(nWins);
cout<<endl<<"Play a Third Game (Y/N)? ";
cin>>ch;
ch=='Y' || ch=='y'
true
game(nWins);
int end=time(0);
Display the Winner and the Time Elapsed.
exit main
cout<<"Quitting Program...";
void cleanUp (Player ** plyrs, int nPlyrs)
Declare out of for loop:
nPlyrs-1
Declare in Loop:
int i=0
i++;
delete plyrs[i];
delete [] plyrs;
exit function
void menu()
Display the Menu
exit function


void game(int &nWins)
Declare Variables:
string name1,name2;
int age,numCrds=0;
int nPlyrs=2;
int opt;
cout<< "Enter Player's Name: "; getline (cin,name1);
cout<< "Enter Opponent's Name: "; getline (cin,name2); cout<<"Enter the Opponent's age: "; cin>>age;
numCrds ==0
true
cout<< "How Many Cards Do You Wish To Generate [1-15]? "; cin>>numCrds;
Deck deck1(numCrds); Deck deck2(numCrds);
deck1.setDck(); deck2.setDck();
DerPlayer oppt(name2,age); Player **plyrs=new Player * [nPlyrs]; plyrs[0]=new Player(name1); plyrs[1]=&oppt; plyrs[0]->setDck(&deck1); plyrs[1]->setDck(&deck2);
UnoCard match;
match.setCrd();
match .getClr() =="None"
true
cout<<endl<< "Card To Match..." <<endl;match.dsply(); cout<<endl<< plyrs[0]->getName() <<"'s Cards To Choose From..."<<endl; plyrs[0]->prntDck();
plyrs [0]->getn Cards()&& plyrs[1]-> getn Cards()
true
C
D
cout<<"Choose a Card (Ex. 1 - Card 1): "; cin>>opt;
opt>deck1 .getnCards() ||opt<1
true
deck1 [opt-1] .getDescr() =="Wild Card"
true
string clr; //Prompt for color cin>>clr
match.setClr(clr); deck1[opt-1].cpyCrd (deck1[deck1.getnCards()-1]); deck1--;
B
deck1[opt-1] .getDescr() =="Draw 1"&& deck1.isMatch (match,opt)|| deck1.isDrw1 (match,opt)
true
match.cpyCrd(deck1[opt-1]); deck1[opt-1] .cpyCrd (deck1[deck1.getnCards()-1]); deck1--; if(plyrs[0]->getnCards()!=0) deck2+=1
B
deck1[opt-1] .getDescr() =="Draw 1"&& deck1.isMatch (match,opt)|| deck1.isDrw1 (match,opt)
true
match.cpyCrd(deck1[opt-1]); deck1[opt-1] .cpyCrd (deck1[deck1.getnCards()-1]); deck1--; if(plyrs[0]->getnCards()!=0) deck2+=2
B
A

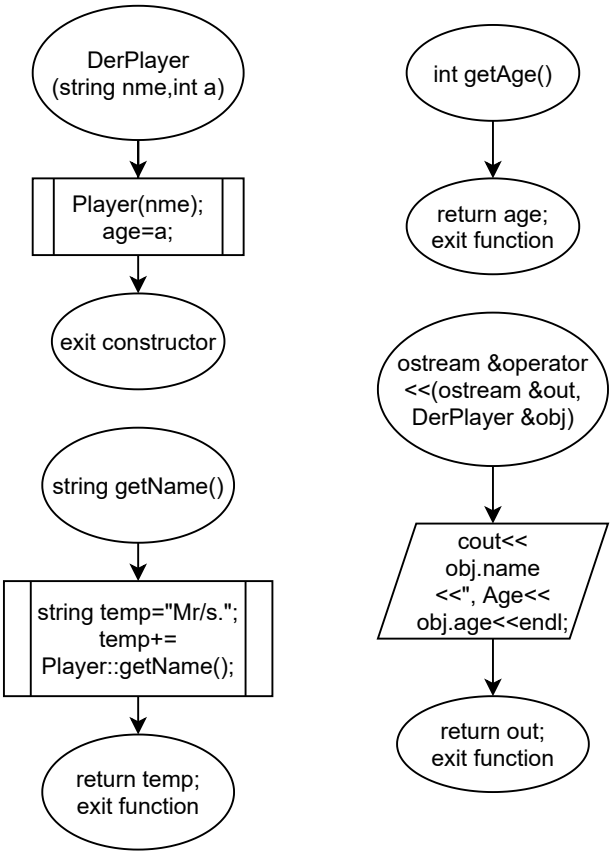

A
deck1
.isMatch
(match,opt)
cout<<
"Card wasn't
matched..."
<<endl;
true
match.cpyCrd(deck1[opt-1]);
deck1[opt-1]
.cpyCrd
(deck1[deck1.getnCards()-1]);
deck1--;
B
Ask the User if
they want to draw a
card or not.
deck1+=1;
plyrs[0]->
getnCards()
!=0
C
true
cout<<endl<<
"Card To Match..."
<<endl;match.dsply();
cout<<endl<<
plyrs[1]->getName()
<<"'s Cards To Choose
From..."<<endl;
plyrs[1]->prntDck();
true
cout<<"Choose a
Card (Ex. 1 - Card 1): ";
cin>>opt;
opt>deck2
.getnCards()
||opt<1
deck2
[opt-1]
.getDescr()
=="Wild
Card"
true
string clr;
//Prompt for color
cin>>clr
C
match.setClr(clr);
deck2[opt-1].cpyCrd
(deck2[deck2.getnCards()-1]);
deck2--;
deck2[opt-1]
.getDescr()
=="Draw 1"&&
deck2.isMatch
(match,opt)||
deck2.isDrw1
(match,opt)
deck2[opt-1]
.getDescr()
=="Draw 1"&&
deck2.isMatch
(match,opt)||
deck2.isDrw1
(match,opt)
true
true
match.cpyCrd(deck2[opt-1]);
deck2[opt-1]
.cpyCrd
(deck2[deck2.getnCards()-1]);
deck2--;
if(plyrs[1]->getnCards()!=0)
deck1+=1
match.cpyCrd(deck2[opt-1]);
deck2[opt-1]
.cpyCrd
(deck2[deck2.getnCards()-1]);
deck2--;
if(plyrs[1]->getnCards()!=0)
deck1+=2
C
C
deck2
.isMatch
(match,opt)
cout<<
"Card wasn't
matched..."
<<endl;
true
match.cpyCrd(deck2[opt-1]);
deck2[opt-1]
.cpyCrd
(deck2[deck2.getnCards()-1]);
deck2--;
C
Ask the User if
they want to draw a
card or not.
deck2+=1;



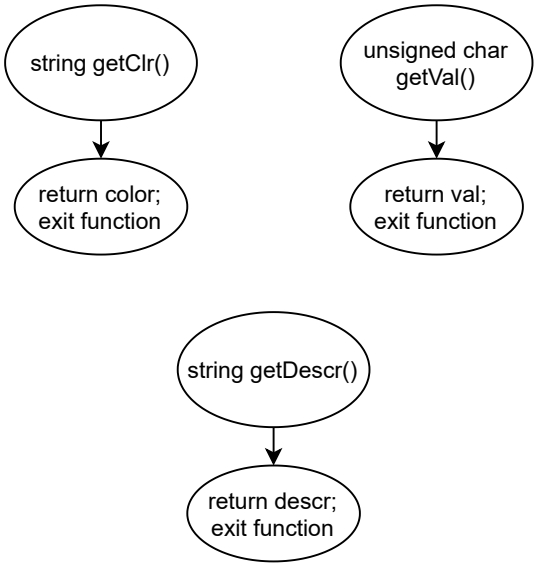
(These are member functions defined in Player.cpp and found in Player.h)



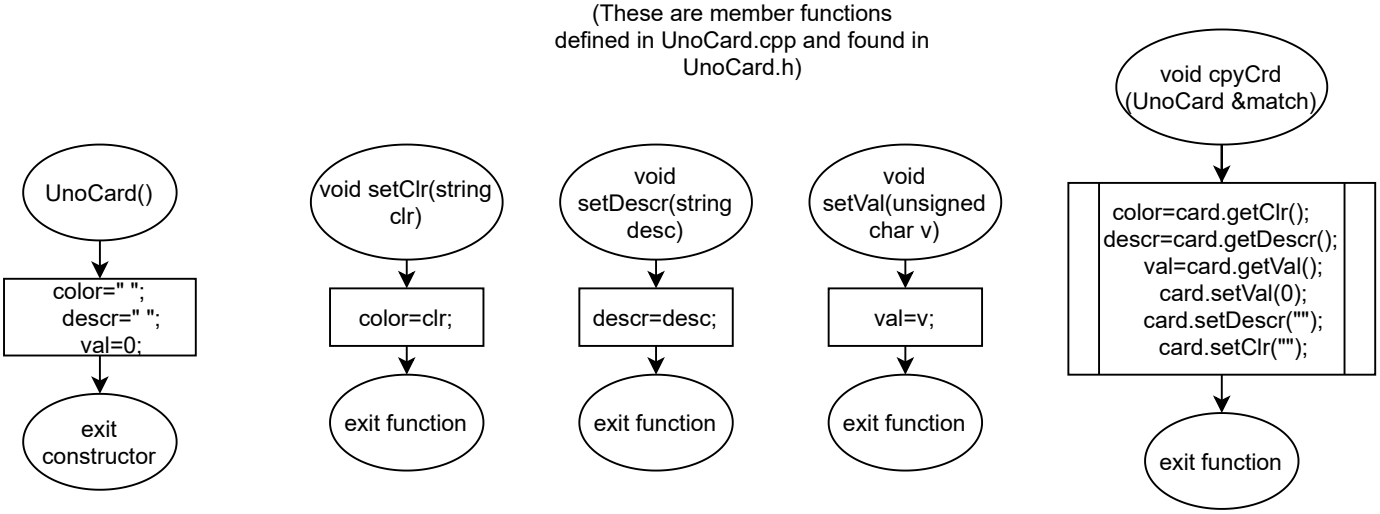
(These are member functions defined in DerPlayer.cpp and found in DerPlayer.h)

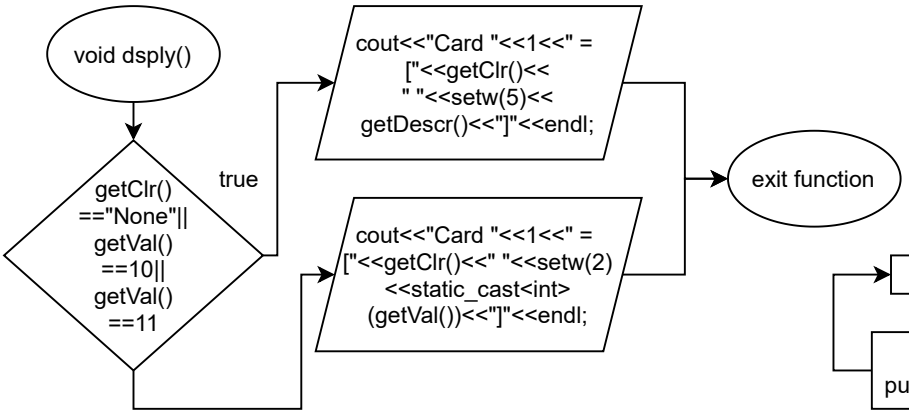


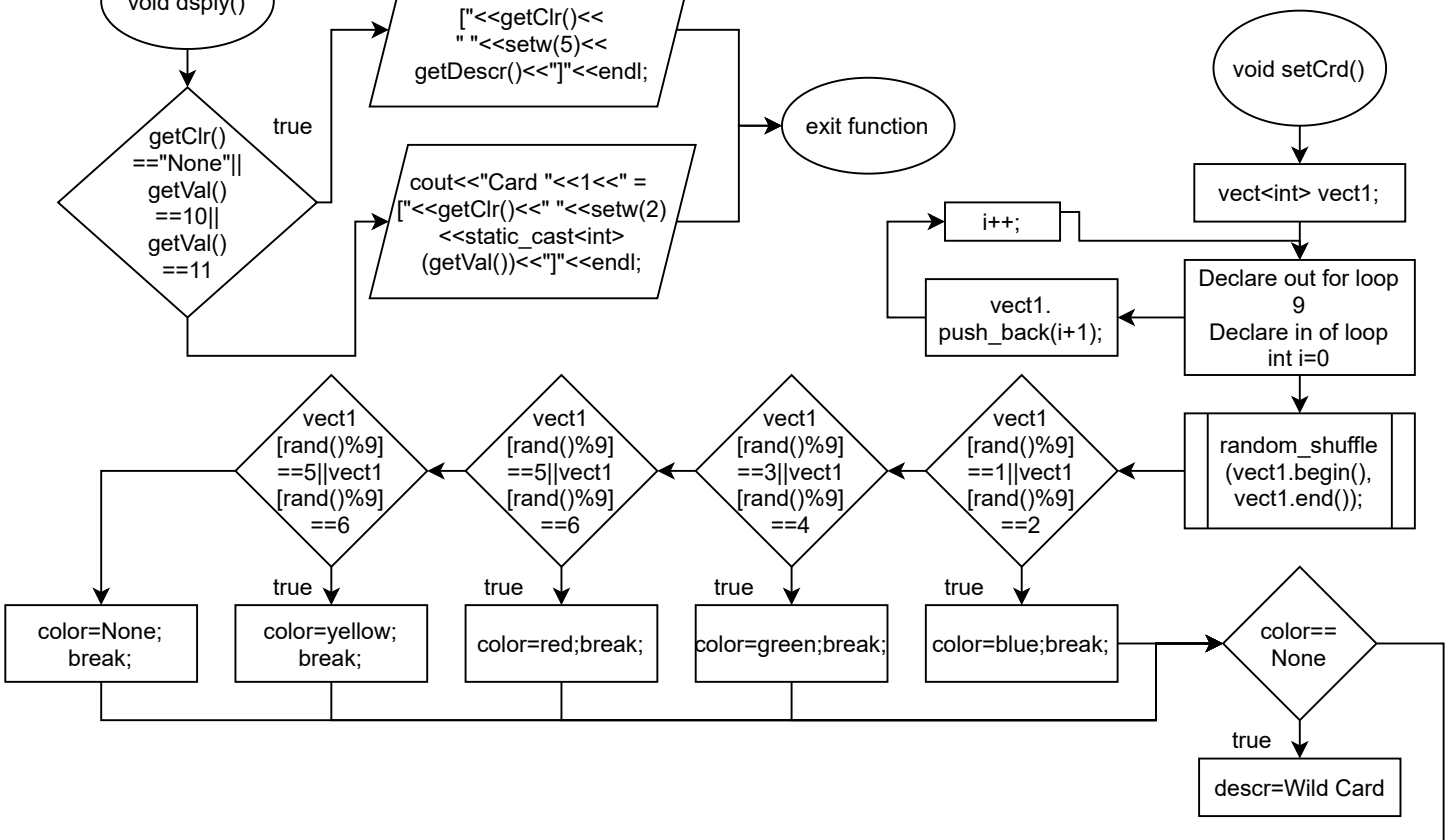
(Getter Functions in UnoCard.h)

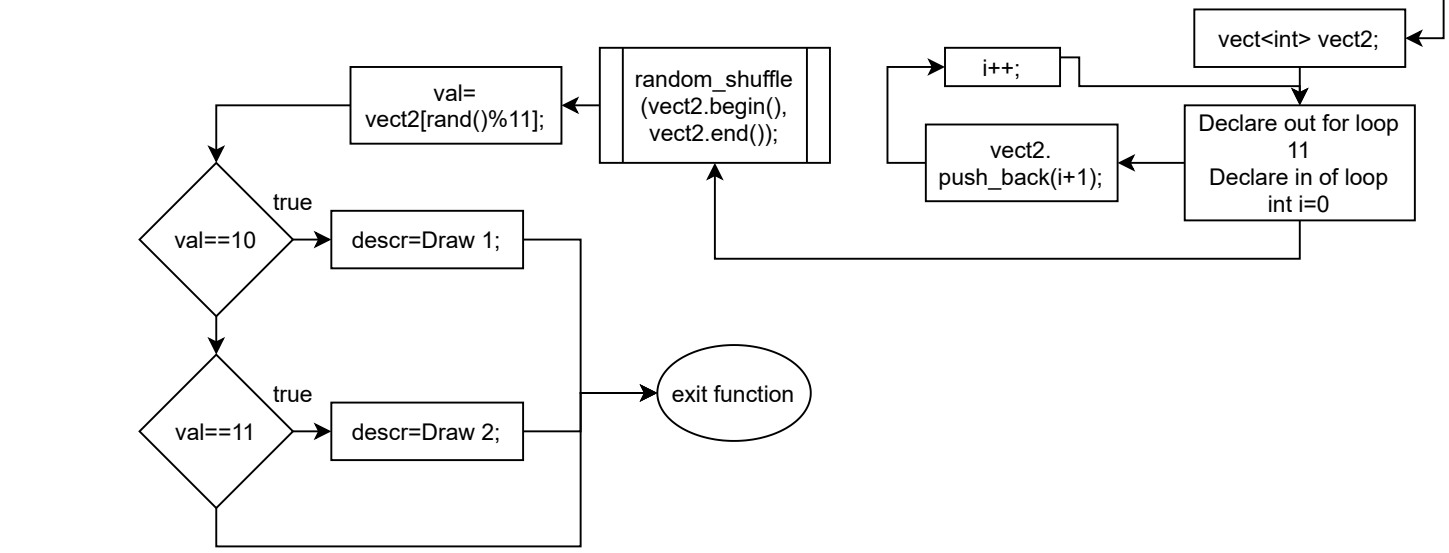


(These are member functions defined in UnoCard.cpp and found in UnoCard.h)

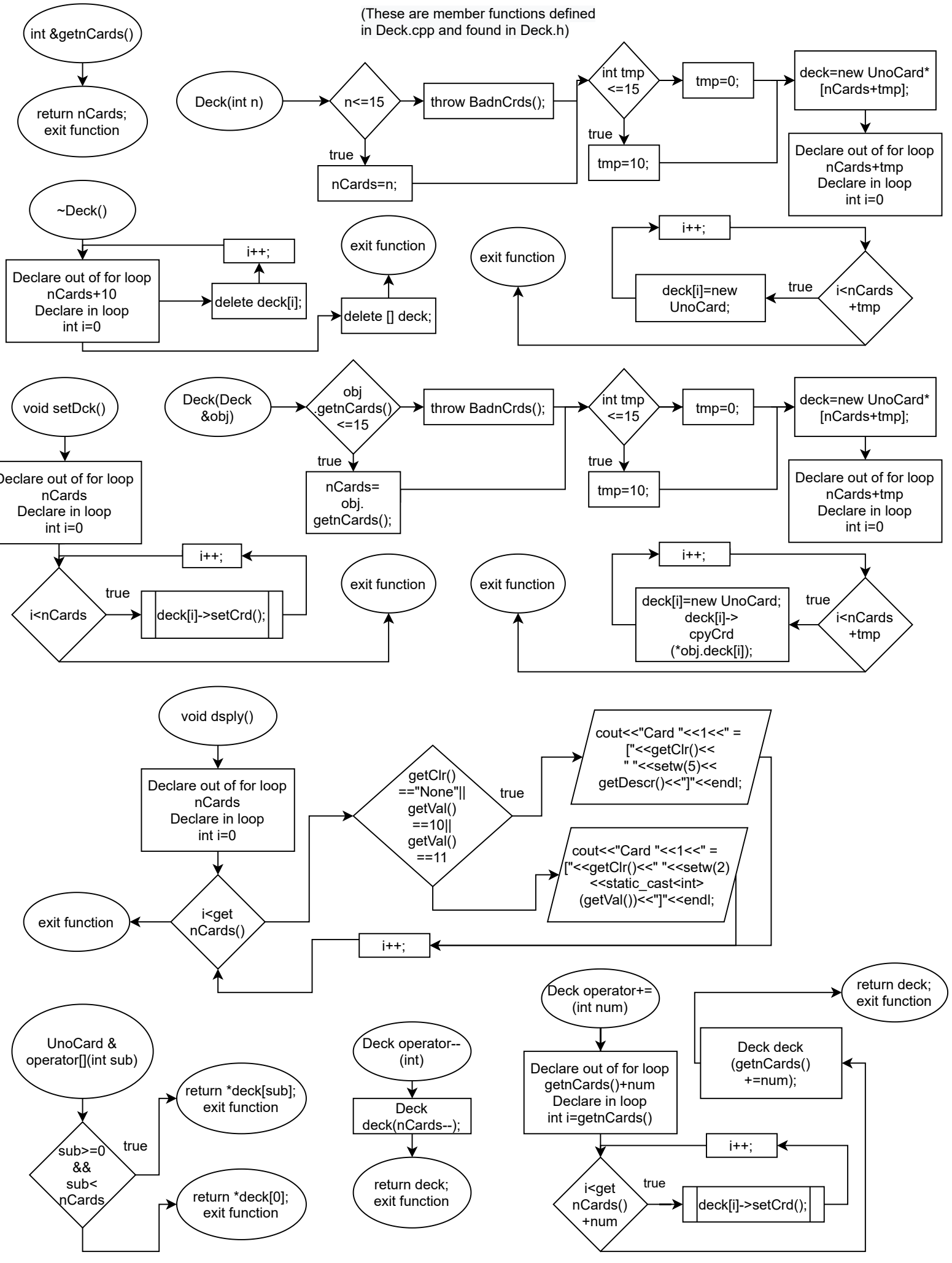
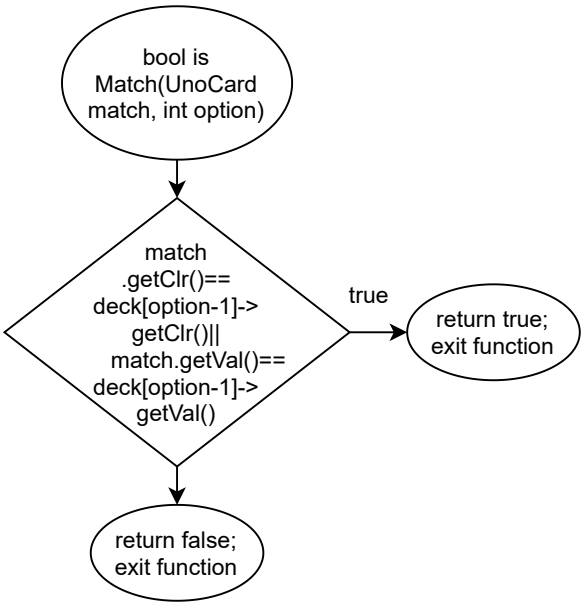
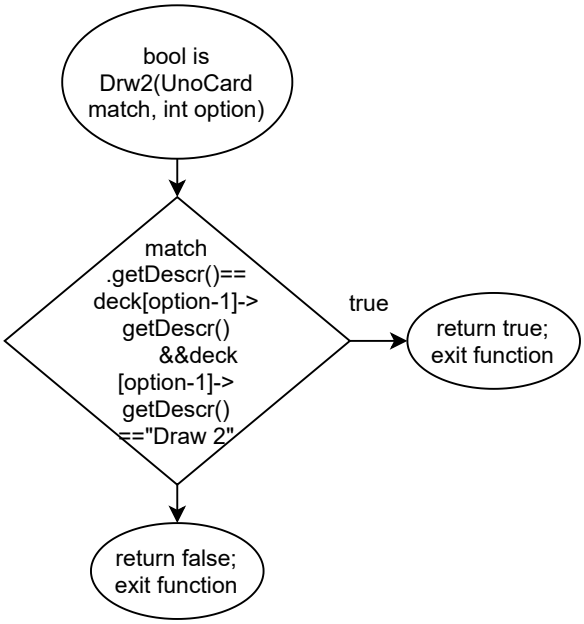
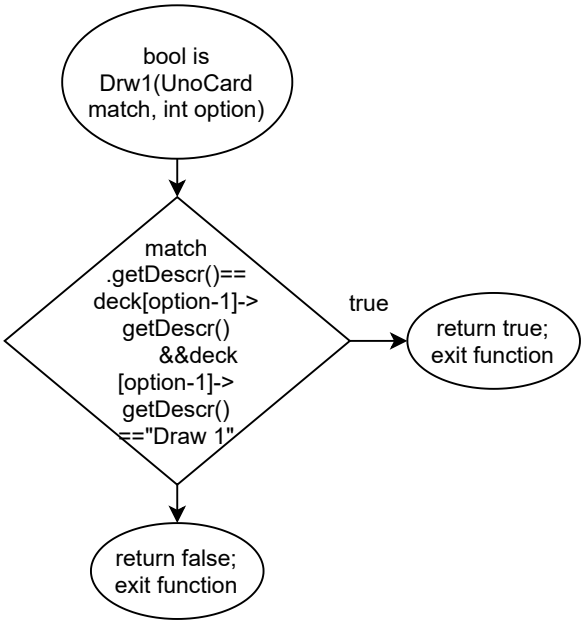








(These are member functions defined in Deck.cpp and found in Deck.h)



(These are member functions defined in Deck.cpp and found in Deck.h)